

Giant coronary arterial aneurysm after drug-eluting stent implantation

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DESCRIPTION

A 55-year-old man with diabetes, a smoker, presented with acute coronary syndrome (ACS). Coronary angiogram revealed single vessel disease in the proximal left anterior descending (LAD) artery (figure 1 and video 1), which was treated with a drug-eluting stent (video 2). The patient had been asymptomatic for 4 months, when he was again admitted with ACS. Coronary angiogram (Integris H5000, Philips) showed a giant coronary artery aneurysm (CAA) in the proximal LAD artery with restenosis (figure 2) where the drug-eluting stent had been implanted. The patient was sent for coronary artery bypass surgery.

CAAs after coronary interventions, the complication is not widely known by coronary interventionist because of its very rare occurrence.¹ Small CAAs are frequently unrecognised incidental findings in patients with coronary artery disease. Giant aneurysm has been defined as when the maximal diameter exceeds 20 mm in adults or 8 mm in children. It was encountered for the first time at a high volume, tertiary care centre in north India offering coronary interventions. We report here an image of giant CAA. The precise mechanism for CAA remains unknown. A few hypotheses have been postulated, such as extensive vessel injury during the initial procedure, hypersensitivity reactions, infectious processes and malappositions.²

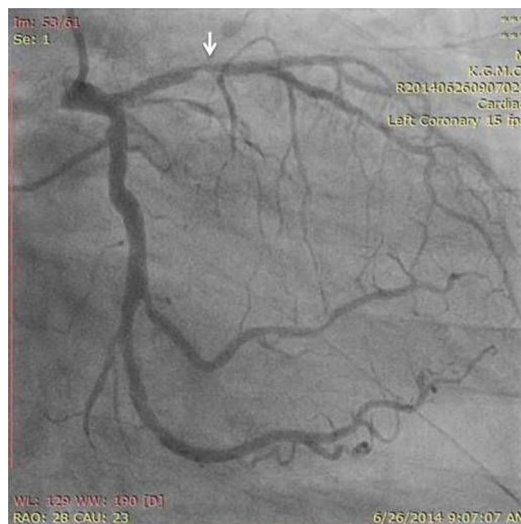
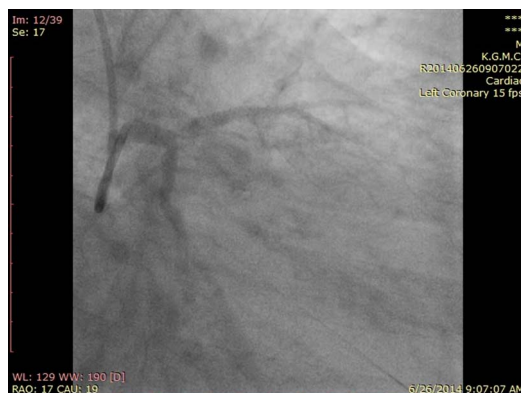


Figure 1 Coronary angiogram, right anterior oblique caudal view, showing severe stenosis in the proximal left anterior descending artery (white arrow).



Video 1 Coronary angiogram, right anterior oblique caudal view, showing severe stenosis in the proximal left anterior descending artery.



Video 2 Coronary angiogram, right anterior oblique caudal view, showing percutaneous angioplasty with stenting of the proximal left anterior descending artery.

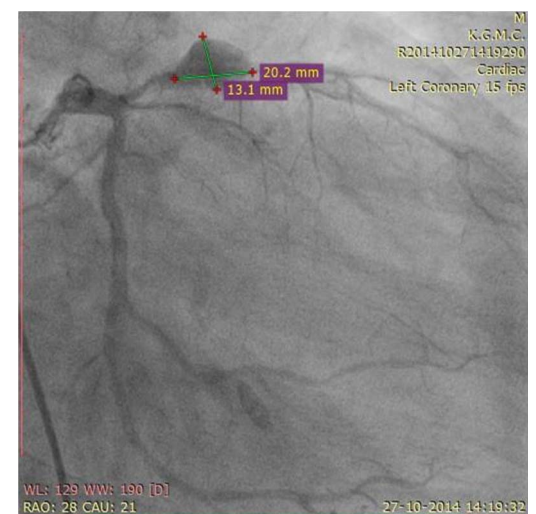


Figure 2 Coronary angiogram showing giant coronary artery aneurysm at the same location where the stent was placed 4 months prior.



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The giant CAA may be incidentally detected in echocardiography, though coronary angiography is required to make an accurate diagnosis of this entity. Intravascular ultrasound imaging is important to delineate anatomical details, which further helps in management.

Learning points

- ▶ Giant coronary artery aneurysm may develop in a short period of months after a drug-eluting stent implantation and may present as acute coronary syndrome.
- ▶ Coronary interventionists should be aware of this very rare entity.

CAA mostly remains asymptomatic but may also present with systemic infections after coronary intervention, angina and ACS. Treatment options are conservative, covered stent placement, coil embolisation and surgical procedures.

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Competing interests None declared.

Patient consent Obtained.

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REFERENCES

- 1 Aoki J, Kirtane A, Leon MB, *et al*. Coronary artery aneurysm after drug-eluting stent implantation. *JACC Cardiovasc Interv* 2008;1:14–21.
- 2 Alfonso F, Pe'rez-Vizcayno MJ, Ruiz M, *et al*. Coronary aneurysms after drug-eluting stent implantation: clinical, angiographic, and intravascular ultrasound findings. *J Am Coll Cardiol* 2009;53:2053–60.

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